

## YEAR 7 MATHEMATICS UNIT 2 SYLLABUS OUTLINE

**Reference(s) Textbook:** NELSON MATHS for the CSF II

**Topics:** Fractions, Time, Geometry, Transformation of Shape

### Syllabus Outline: Fractions

Week	Curriculum Focus	Activities	Reference	Assessment Tasks	VELS
1 – 3	<ul style="list-style-type: none"> <li>• Concept of a Fraction</li> <li>• Comparing Fractions</li> <li>• Equivalent Fractions</li> <li>• Simplification of Fractions</li> <li>• Improper Fractions and Mixed numbers</li> </ul>	<ul style="list-style-type: none"> <li>• Fraction Wall</li> </ul>	Nelson Ex. 8.1 Nelson Ex. 8.2 Nelson Ex. 8.3 Nelson Ex. 8.4 Nelson Ex. 8.5 Nelson Ex. 8.6 Nelson Ex. 8.7	<ul style="list-style-type: none"> <li>• <i>Worksheet 1</i></li> <li>• <i>Fractions Test 1</i></li> </ul>	<p><b>Strand- Discipline Based Learning</b>  <b>Domain – Mathematics</b>  <b>Dimension –Number (Level 5)</b></p> <p>Students write sequences of equivalent fractions for a fraction given in simplest form.</p> <p>Students carry out arithmetic computations using mental and/or written algorithms. They carry out exact arithmetic computations involving common fractions.</p>

# Syllabus Outline: Time

Week	Curriculum Focus	Activities	Reference	Assessment Tasks	VELS
4 & 5	<ul style="list-style-type: none"> <li>•Time Lines</li> <li>•Units of Time</li> <li>•Time Differences</li> <li>•Reading Time</li> <li>•Using Timetables –buses</li> <li>•Ordering Events</li> <li>•Rates and Speed</li> </ul>	Bus Timetable (Using Technology) Refer: Nelson Page 429	Nelson Ex. 12.1 Nelson Ex. 12.2 Nelson Ex. 12.3 Nelson Ex. 12.4 Nelson Ex. 12.5 and 12.5 Nelson Ex. 12.7 Nelson Ex. 12.8 Nelson Chap 12 Review	NU 7.5 – Time 2 NU 7.6 – Time 3  Application Task – A holiday in Coffs Harbour  <i>Open Book Test - Time</i>	<b>Strand- Discipline Based Learning</b> <b>Domain – Mathematics</b> <b>Dimension –Measurement (Level 5)</b> Students accurately measure the characteristics of time. They calculate, using rational and real numbers, formulas for relationships between measurement variables; <b>Dimension –Working Mathematically (Level 5)</b> They use technology (a spreadsheet), to investigate relations for simple algebraic expressions.

## Syllabus Outline: FRACTIONS II

Week	Curriculum Focus	Activities	Reference	Assessment Tasks	VELS
6 - 10	<ul style="list-style-type: none"> <li>• Adding fractions</li> <li>• Subtracting fractions</li> <li>• Fractions of quantities</li> <li>• Multiplication of fractions</li> <li>• Division of fractions</li> </ul>	<p>Worksheet - 8.1 Fast Fractions: add and subtract</p> <p>Worksheet - 8.2 Fast Fractions: multiply and divide</p>	<p>Nelson Ex. 8.8</p> <p>Nelson Ex. 8.9</p> <p>Nelson Ex. 8.10</p> <p>Nelson Ex. 8.11</p> <p>Nelson Chap 8 Review</p>	<p>NU 7.7 – Fractions and Percentages – just Part A:Level 5</p> <p>NU 7.8 – Ratio, fractions and Percentages (Q.7-17,20)</p> <ul style="list-style-type: none"> <li>• <i>Fractions Test 2</i></li> </ul>	<p><b>Strand- Discipline Based Learning Domain – Mathematics Dimension –Number (Level 5)</b></p> <p>Students carry out arithmetic computations using mental and/or written algorithms. They carry out exact arithmetic computations involving common fractions.</p> <p><b>Dimension –Working Mathematically (Level 5)</b></p> <p>They transform and manipulate two- and three-dimensional shapes, including projections from three dimensions to two dimensions. They use measuring implements and computer software to construct accurate and detailed representations of shapes and solids. They explain geometric propositions by varying the location of key points and/or lines in a construction.</p>

# Syllabus Outline: Geometry

Week	Curriculum Focus	Activities	Reference	Assessment Tasks	VELS
11 - 12	<b>Shapes and Solids</b> <ul style="list-style-type: none"> <li>• Properties of two Dimensional Shapes</li> <li>• Recognising two Dimensional Shapes</li> <li>• Drawing Three dimensional Shapes</li> </ul>	Four Cube Houses	Nelson Ex. 2.1 Nelson Ex. 2.2 Nelson Ex. 2.6 Nelson Ex. 2.7	<b>SP 7.1 – Two Dimensional Shapes</b>  <b>Application Task</b> Chinese Tangrams	<b>Strand- Discipline Based Learning Domain – Mathematics Dimension –Space (Level 5)</b> At Level 5 students construct exactly two-dimensional and simple three dimensional shapes according to specifications. They relate similarity and congruence in the case of single transformations to enlargement from a common fixed point, and the superimposition of geometric objects respectively. They form patterns of shapes, including simple tessellations of a single shape, demonstrating an understanding of similarity and congruence. They use two-dimensional nets to construct a simple three-dimensional object such as a prism or a platonic solid. Students use, describe and apply the properties of regular and irregular polygons, in particular, triangles and quadrilaterals.
13 – 15	<b>Angles and Direction</b> <ul style="list-style-type: none"> <li>• Naming Angles</li> <li>• Measuring Angles</li> <li>• Constructing Angles</li> <li>• Estimating Angles</li> </ul>	<i>Technology Task</i> Creative Shapes	Nelson Ex. 7.2 Nelson Ex. 7.3 Nelson Ex. 7.4 Nelson Ex. 7.5  Nelson Ex. 7.6  Nelson Chap 2 Review Q.3,4 Nelson Chap 7 Review Q.3-5,7,8	<b>SP 7.3 – Angles</b>  • <i>Geometry Test</i>	
16 -	<b>Transforming Shape</b> <ul style="list-style-type: none"> <li>• Translation</li> <li>• Reflections and Symmetry</li> <li>• Rotation</li> <li>• Tessellations</li> </ul>		Nelson Ex. 11.1 Nelson Ex. 11.2 Nelson Ex. 11.3 Nelson Ex. 11.4 Nelson Ex. 11.5. Nelson Ex. 11.6		